

Serial No. 09/677,060
Response Dated June 16, 2004
Reply To Office Action Of April 13, 2004

REMARKS

In the Office Action dated April 13, 2004, the Examiner noted that claims 1-39 are pending in the application, and that claims 1-39 are rejected under one or more of the following statutory sections: 35 U.S.C. §112 and 35 U.S.C. §103. The Examiner also noted that claims 8, 19, and 32 are objected to and require appropriate correction.

By this response, Applicants have amended claims 1, 7, 8, 19, and 32. Particularly, claim 1 has been amended to insert a comma and thereby improve the readability of the claim; claims 8, 19, and 32 have been amended to clarify a feature of Applicants' invention dealing with a switching element; and claim 7 has been amended to correct the claim dependency.

In view of the above amendments and the following discussion, Applicants submit that the claims pending in the application are believed to be definite under 35 U.S.C. §112, novel under 35 U.S.C. §102, and nonobvious under 35 U.S.C. § 103. Thus, Applicants believe that the application is in condition for allowance.

I. OBJECTION TO THE CLAIMS

The Examiner has objected to claims 8, 19, and 32 for certain informalities. Claims 8, 19, and 32 have been amended to overcome the grounds of objection.

Claims 8, 19, and 32 each call for a "packet/circuit switch." Contrary to the suggested correction, this term requires a switching element to perform conversion operations. The conversions are from a packet format to a circuit switched format and vice versa. Accordingly, Applicants have amended these claims to call for a switch adapted to perform packet to circuit switched conversion and vice versa. The amendments are supported by the original specification and are proper and justified. The amendments add no new matter. Therefore, it is submitted that the amendments to claims 8, 19, and 32 obviate the grounds of objection. It is respectfully requested that the objection to the claims be removed.

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II. REJECTION OF CLAIMS UNDER 35 U.S.C. §112

Claims 32, 33, and 34 have been rejected under 35 U.S.C. §112 as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicants regard as their invention. Specifically, the Examiner has stated that it is unclear how a switch can convert data packets to circuit switched traffic as switches only route and direct data to a destination and do not manipulate the data. Applicants respectfully traverse this rejection.

Claim 32 calls for "a switch for converting data packets to circuit switched traffic and vice versa." The functionality of the claimed element is broader than that of a simple switch. The element in question receives packets and transmits circuit switched traffic; it also receives circuit switched traffic and transmits data packets. Clearly, this claimed element is one in which the format conversion and switching functionalities are integrated. It is supported by the drawings and the specification beginning at page 6, line 32, wherein Applicants state that:

First CMTS 120 then communicates voice signals to first CPBTG 122 where the voice signal is depacketized and communicated to first switch 128 in circuit form rather than packet form. Specifically, CPBTG 122 converts voice path setup and packet to circuit conversions and vice versa as opposed to present devices which only perform Network Based Call Signaling (NCS) and voice path setup. Illustratively, a product such as the Packet Star Access Concentrator model 1250 (PSAX 1250) manufactured by Lucent Technologies, Inc of Murray Hill, New Jersey could be used with minor modifications as CPBTG 122.

Additionally, Applicants have stated that the switching and format conversion functionalities may be integrated. For example, Applicants' specification at page 4, lines 22 – 24 states that:

It should be appreciated by those skilled in the art that first switch 128 may be a voice switch with a wireless interface and that CTBTG may be integrated into the switch.

In light of the remarks presented above, claim 32 is believed to be clear and definite. Since claims 33 and 34 depend from claim 32, claims 33 and 34 are also believed to be clear and definite. It is respectfully submitted that claims 32, 33, and 34 are allowable under 35 U.S.C. §112.

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III. REJECTION OF CLAIMS UNDER 35 U.S.C. §103(a)

A. Rejection over Hamalainen in view of Valentine

Claims 1-8, 11-19, 23-28 and 35-39 stand rejected as being unpatentable over U.S. Patent 5,802,465 issued to Hamalainen et al. (hereinafter "Hamalainen et al." or "Hamalainen") in view of U.S. Patent 6,363,253 issued to Valentine et al. (hereinafter "Valentine et al." or "Valentine"). This rejection is respectfully traversed.

Hamalainen et al. teach a wireless network capable of data transfer. Generally, the wireless network carries speech and signaling or control information over its various channels. Speech is generally carried over the traffic channels and signaling or control information is carried over the control channels. See *Hamalainen et al.*, FIG. 2. According to Hamalainen et al., it is possible to send packet data over the channels reserved for speech or over the channels reserved for control and signaling information. See *Hamalainen patent*, cols. 7 and 8.

Hamalainen et al. fail to teach, show, or suggest a system wherein the speech or voice data travel over a different communication network from the signaling or control data as claimed by Applicants. In the Hamalainen system, both the traffic channels that are intended for speech or voice data and the control channels that are intended for control or signaling data exist as different wireless channels allocated between the mobile subscriber and the mobile base station. Although the channels may be different, the communication network remains the same for those channels. Information such as speech or packet data carried in the traffic channels travels over a wireless network, the very same wireless network that carries the information in the control channels. There is no appreciation by Hamalainen et al. that the speech or packet information can be sent over one network such as a packet network, for example, while simultaneously sending the control or signaling information over a different network such as a wireless network. This crucial point of distinction between Hamalainen et al. and Applicants' claimed invention is recognized by the Examiner in the present Office Action.

Valentine presents a wireless system in which call setup is accomplished over the traditional wireless network elements, while the subsequent handling of voice and data traffic is handled over an IP network that is part of the wireless system. In fact,

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Valentine's system sends and receives all information, whether it is signaling data or voice traffic, over the same wireless network link connecting the end user at mobile station 20 to the cell site at base transceiver station 24. As a result, Valentine transmits and receives signaling data and voice information over the same network not different networks, as claimed by Applicants. That is, Valentine sends the voice and call setup information over the same wireless network, an air interface between the mobile station and the base transceiver station.

Valentine fails to teach, show, or suggest a system wherein the speech or voice data travel over a different communication network from the signaling or control data, as claimed by Applicants. Although the remaining networks and network paths after the base transceiver station may be different in Valentine, the communication network utilized at the outset remains the same for the voice information and the signaling data. Valentine does not even remotely teach, show or suggest that the voice information can be sent over one network, while simultaneously sending the control or signaling information over a different network. This is a critical point of distinction between Valentine and Applicants' claimed invention.

In the present Office Action, it is suggested that the teachings of the Hamalainen and Valentine references be combined. The motivation offered for making such a combination is said to be "that having a dedicated network for call setup saves resources and doesn't tie up traffic." The suggested motivation is not found expressly or implicitly in the references at hand. Lacking any motivation to combine these teachings stated within the four corners of one or the other reference, it can only be deduced that hindsight is motivating the suggested combination in view of Applicants' own teachings. Such hindsight, using Applicants' own teachings against themselves in order to make the suggested combination of references, is impermissible and cannot be employed here for any purpose.

It should be noted that there is a discussion of avoiding unnecessarily tying up circuits in Valentine at col. 4, lines 52-55. But, this statement does not refer to any benefit flowing from having a separate network. Instead, it refers to another feature of Valentine, namely, having the call setup information indexed and stored in a network

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cache after a first call is made to a called party so that the information can be recalled from memory and reused when the calling party wants to reestablish a call to the same called party. Thus, Valentine cannot be said to motivate the combination of references.

Assuming *arguendo* that the references could be properly combined, a premise with which Applicants disagree, the resulting combination would still lack the unique features of Applicants' claimed invention. That is, the combination would lack any teaching that the signaling data and voice data should be carried by different communication networks. As shown above, Hamalainen and Valentine each send the signaling data and the voice information over the same wireless network. Applicants claim an invention in which voice data and signaling data for a particular call are bifurcated and then transmitted over different communication networks. In support of the claimed invention, Applicants have described many examples in the specification showing a signaling path established over a wireless network while the voice path is established over a different network such as a packet network.

Neither Hamalainen nor Valentine, separately or in combination, teach, show, or suggest "identifying, for each communication link to be established, respective signaling data and voice data; and transmitting said signaling data via a first network and said voice data via a second network, wherein the first network is different from the second network", as stated in amended claim 1. Claims 2 through 8 depend directly and indirectly from claim 1 and include the all limitations of the base claim. For all the reasons set forth above, it is submitted that Applicants' claimed invention defined in claims 1 through 8 would not have been obvious to a person skilled in the art upon a reading of the Hamalainen and Valentine references at the time the invention was made. Therefore, Applicants believe that claims 1 through 8 are allowable under 35 U.S.C. §103.

Neither Hamalainen nor Valentine, separately or in combination, teach, show, or suggest "segregating signaling traffic and related voice traffic ... and transmitting said voice traffic via said communications link established by a controller, said voice traffic and said signaling traffic being carried via different communication networks", as stated in claim 11. Claims 12 through 19 depend directly and indirectly from claim 11 and

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include the all limitations of the base claim. For all the reasons set forth above, it is submitted that Applicants' claimed invention defined in claims 11 through 19 would not have been obvious to a person skilled in the art upon a reading of the Hamalainen and Valentine references at the time the invention was made. Therefore, Applicants believe that claims 11 through 19 are allowable under 35 U.S.C. §103.

Neither Hamalainen nor Valentine, separately or in combination, teach, show, or suggest "establishing a signalling link to a switch via a first transport network and establishing a voice path to said switch via a second transport network responsive to a determination that said called party answers, said first transport network being different from said second transport network", as stated in claim 23. Instead, Hamalainen and Valentine transmit signaling data and voice data over the same wireless network from the calling party. In Valentine, the call setup information traverses a path to the switch at MSC14, but goes no farther. But the path traversed by the voice information does not intersect that switch or any other point along the signalling data path in any manner. Thus, Valentine fails to meet another of Applicants' claimed limitations, namely, establishing a voice path through the same switch as the signaling link. For all the reasons set forth above, it is submitted that Applicants' claimed invention defined in claim 23 and claims 24-28, directly and indirectly dependent from claim 23, would not have been obvious to a person skilled in the art upon a reading of the Hamalainen and Valentine references at the time the invention was made. Therefore, Applicants believe that claims 23 through 28 are allowable under 35 U.S.C. §103.

Neither Hamalainen nor Valentine, separately or in combination, teach, show, or suggest a computer readable medium that causes a computer to perform "segregating signaling traffic and related voice traffic ... and transmitting said voice traffic via said communications link established by a controller, said voice traffic and said signaling traffic being carried via different communication networks", as stated in claim 35. Claims 36 through 39 depend directly and indirectly from claim 35 and include the all limitations of base claim 35. For all the reasons set forth above, it is submitted that Applicants' claimed invention defined in claims 35 through 39 would not have been obvious to a person skilled in the art upon a reading of the Hamalainen and Valentine

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references at the time the invention was made. Therefore, Applicants believe that claims 35 through 39 are allowable under 35 U.S.C. §103.

B. Rejection over Hamalainen and Valentine further in view of Kung

The Examiner has rejected claims 9, 10, 20, 21, 30 and 31 as being unpatentable over Hamalainen and Valentine further in view of U.S. Patent 6,252,952 to Kung (hereinafter referred to as "Kung"). This rejection is respectfully traversed.

Claims 9-10 depend from independent claim 1; claims 20-21 depend from independent claim 11; and claims 30-31 depend from independent claim 23. The differences between Applicants' invention, as defined in the independent base claims, and the prior art references of Hamalainen and Valentine has already been described above in Section III.A of the Remarks and will not be repeated herein for the sake of brevity. But those remarks are understood to apply with equal weight herein in describing the differences between the rejected dependent claims and the prior art references.

Kung teaches a system that, in pertinent part, allows a multiplicity of premises equipment to communicate with a broadband network. The premises equipment interface with a broadband residential gateway to allow transmission into a hybrid fiber/coax (HFC) plant. The residential gateway provides the conversion of input signals into appropriate output signals suitable for use over the HFC via transceiver element 302. *See Kung patent, col. 18, lines 15 – 23.* Contrary to the Examiner's assertion, wireless interface 345 allows for wireless devices within the customer premises to communicate with the residential gateway, not with a wireless network. *See Kung patent, col. 17, lines 41 – 44.* Kung fails to provide for any segregation of voice and signaling information within the residential gateway. Kung also fails to teach the transmission of voice and signaling information over different communication networks. In Kung, all transmissions to and from the customer premises take place via the hybrid fiber/coax plant.

The addition of Kung to the combination of Hamalainen and Valentine still fails to produce a set of elements that even remotely resembles Applicants' claimed invention,

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because the combination of references still does not teach the transmission of voice and signaling traffic over different communication networks. This limitation is present in Applicants' independent base claims and is therefore present in claims 9, 10, 20, 21, 30, and 31.

In the present Office Action, the Examiner expressly admits that neither Hamalainen nor Valentine teach the claimed limitations for Applicants' Media Terminal Adapter – Cellular Transceiver in either its integrated form (claims 9, 20, and 30) or its non-integrated form (claims 10, 21, and 31). Kung has been added to the Valentine and Hamalainen combination in order to provide the missing MTA-CT functionality. But, as described already above, Kung does not even have the requisite CT portion that performs the "transmitting" or "establishing" steps of Applicants' method. Kung's wireless interface 345 does not provide any transmission or link establishment function with a wireless communication network or its related base station, as claimed and described by Applicants. Instead, Kung's wireless interface deals with the problems of communicating between the residential gateway and the customer premises equipment, all on the customer premises, before the information is transmitted over the HFC plant.

For all the reasons set forth above, it is submitted that Applicants' claimed invention defined in claims 9, 10, 20, 21, 30, and 31 would not have been obvious to a person skilled in the art upon a reading of the Hamalainen, Valentine, and Kung references at the time the invention was made. Therefore, Applicants believe that claims 9, 10, 20, 21, 30, and 31 are allowable under 35 U.S.C. §103.

C. Rejection over Hamalainen and Valentine further in view of Jachowski

The Examiner has rejected claims 22 and 29 as being unpatentable over Hamalainen and Valentine further in view of U.S. Patent 4,726,071 to Jachowski (hereinafter referred to as "Jachowski"). This rejection is respectfully traversed.

Claims 22 and 29 depend from independent claims 11 and 23, respectively. The differences between Applicants' invention, as defined in the independent base claims, and the prior art references of Hamalainen and Valentine has already been described above in Section III.A of the Remarks and will not be repeated herein for the sake of

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brevity. But those remarks are understood to apply with equal weight herein in describing the differences between the rejected dependent claims and the prior art references.

Both claim 22 and claim 29 define the additional step of switching the voice traffic back to the same communication network carrying the signaling traffic, when loss of local power is detected. The Examiner has expressly admitted that neither Hamalainen nor Valentine disclose this step.

Jachowski has been added to the combined references of Hamalainen and Valentine in order to overcome the stated deficiency in the teachings of Hamalainen and Valentine. Jachowski discloses a need to easily tune a resonant cavity in a wireless system to another frequency if, for example, a channel becomes inoperative. Thus, Jachowski teaches that the particular channel be kept on the same network as the other channels, just switched to a different frequency. There is no teaching in Jachowski that, if a channel on one network becomes inoperative, then the information on the inoperative channel will be switched to a different network as claimed by Applicants. Thus, Jachowski cannot be read as curing the insufficient teachings of Hamalainen and Valentine as related to Applicants' claimed invention.

In light of the reasons given above, it is respectfully submitted that Applicants' invention as defined by claims 22 and 29 would not have been obvious to a person of ordinary skill in the art upon a reading of the references of Hamalainen, Valentine and Jachowski, separately or in combination, at the time Applicants' invention was made. Therefore, it is believed that claims 22 and 29 are allowable under 35 U.S.C. §103.

CONCLUSION

In view of the foregoing amendments and remarks, Applicants respectfully submit that this application is in condition for allowance. Reconsideration and allowance are respectfully solicited.

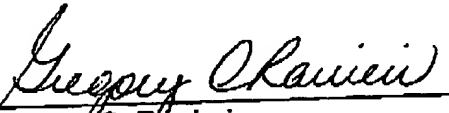
If, however, the Examiner believes that there are any unresolved issues requiring adverse final action in any of the claims now pending in the application, it is requested that the Examiner telephone Mr. Gregory C. Ranieri, Esq. at (732) 530-9404 so that

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appropriate arrangements can be made for resolving such issues as expeditiously as possible.

Respectfully submitted,

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